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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,942	04/02/2004	Antoon Johannes Gerardus van Rossum	005032.00053	8940
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BANNER & WITCOFF, LTD. 1100 13th STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051			EXAMINER KORNAKOV, MIKHAIL	
			ART UNIT 1746	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/815,942	<b>Applicant(s)</b> VAN ROSSUM ET AL.	
	<b>Examiner</b> Michael Kornakov	<b>Art Unit</b> 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Applicants' response dated 06/05/2007 is acknowledged. Claims 29 and 41 are amended. Claims 29-41 are examined on the merits.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 29-37, 39-41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (U.S. 5,574,117) in view of JP 51127181.

Yoshida discloses an ***alkali soluble film***, comprising an ***acrylic polymer as a binder***, which acrylic polymer is obtained by bulk polymerization and has a number average molecular weight **1,000-1,000,000** and  $M_w/M_n$  ratio of **less than 5**. **A glass transition temperature of the binder is -80°C or higher** (see abstract). The soluble film is removable ***by alkali solution and is useful as protective film coating for agricultural use*** (see col.8, lines 17-27). Specific monomers named in the instant claim 29 are found in Yoshida's Examples, such as Example 1-1 in col.43, 44, Example 2-27 in col.53 and others. As for the acid value number, a broad teaching of Yoshida is that the acid value ***is higher*** than 65 mg/g, and there are several specific examples, such as example which cite the acid values of **150mg/g**, which is a specific point within the claimed range. The acrylic polymer of Yoshida when used in compositions for protective coatings employs different additives, such as reinforcing agents, fillers, antioxidants, plasticizers, lubricants such as carbon black, silica based anhydrous salicylic acid, **calcium carbonate** (col. 5, lines 35-40) and **titanium oxide** (col. 9, line 64), which are named as a pigments in the instant claim 35.

Yoshida further teaches that for an alkali soluble adhesive the polymer binder is combined with solvent wax, tackifier, and if 100 parts of a polymer is combined with 0-400 parts of solvent, 0-50 parts of wax, and 0-50 parts of tackifier, as taught by Yoshida, then the amount of a binder as set forth in the instant claims 34 and 36 is clearly within the claimed range. Example 2-21 shows the production of a polymer, which has weight average molecular weight **32,000, polydispersity 2.2, and acid value of 160mg/g.**

**These are all three characteristics within the claimed range disclosed in a single embodiment of Yoshida.** See also Table 2-5 in col.53, Examples 2-15. comparative example 2-9 in col.56, see also claims 5, 6 in col.60

Polycarboxylic acid thickener is taught by Yoshida. The detergents taught by Yoshida throughout entire Patent are the pigment dividers of the instant claims.

Yoshida **teaches the protective coating as instantly claimed with characteristics as instantly claimed.** He does not specifically attribute such coating to a green house, however clearly motivates those skilled in the art to do so by utilizing his **protective film coating removable by alkali solution for agricultural purposes** (col.8, lines 17-27). Yoshida specifically emphasizes the use of his compositions for alkali soluble films used in agriculture as protective coatings, films are having strength and superior in blocking resistance (see, for example, col.8, lines 4-25), thus merely not naming the "green house" Yoshida teaches the film for such intended use.

The use of films formed from polymers and copolymers of acrylates for greenhouses have long been known in the art. Thus JP'118 discloses **selectively light transmitting films comprising polyalkyl methacrylate type copolymer films as the**

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**base material**, films transmitting  $\geq 30\%$  of light of 0.4 to 0.7  $\mu$ m in wavelength and reflecting  $\geq 20\%$  of light of 2 to 10  $\mu$ m in wavelength. Copolymer films formed by copolymerizing 26 to 97 wt. % of alkyl methacrylates containing 1-4C alkyl, 3-74 wt.% of alkyl acrylates having 1-8C alkyl and 0-40 wt.% of copolymerizing monomers (methacrylic acid, acrylonitrile, styrene, etc.). The films are **useful for agricultural greenhouses**, or covers for solar water heating devices.

Both Yoshida and JP'718 **disclose substantially identical polymer films**, wherein Yoshida teaches the characteristics as instantly claimed, and provides clear motivation and suggestion to use his films for protective coatings in agricultural use, and JP'718 teaches these polymers TO BE USED in a greenhouse. Therefore, there is a CLEAR MOTIVATION AND SUGGESTION IN BOTH REFERENCES TO USE THE POLYMER FILMS of Yoshida in a greenhouse as taught by JP'181.

It is also noted that JP 5-170941 and US 5,519,964 also teach the use of substantially similar polymer films in greenhouses, thus showing that at the time the invention was made the use of polymer films of Applicants was conventionally used in green houses. With regard to claim 41, the specific range of 10-20°C for the glass transition temperature is not specifically taught by Yoshida, however, the copolymer compositions having acid values of 65 or higher, polydispersity of 3 or less and glass transition temperature of higher than 0°C are clearly shown as admitted by Applicants in their response on page 8. Therefore, one skilled in the art having a knowledge that the glass transition temperature of a copolymer depends on the relative amounts of comonomers in copolymer and motivated by the disclosure of Yoshida of Tg higher than 0°C, would

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have found it obvious to optimize the amount of comonomers in order to achieve the desired Tg based on the desired properties of the resulting film.

4. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of JP'181 as applied to claim 29 above and further in view of Wieczorrek (U.S. 4,409,266).

While disclosing different additives that can be used as adhesion promoters, Yoshida and JP'181 do not specifically disclose silanes as adhesion promoters. Wieczorrek discloses shatterproof coating of glass surfaces by coating the surfaces with a coating composition. The glass surfaces to be coated being coated before application of the coating composition with a physically drying priming lacquer containing a ***silane adhesion promoter*** and a catalyst which accelerates hardening of the coating composition and, as binder, a polymer which has a linear molecular structure and which is soluble in lacquer solvents (abstract). Because all the references are concerned with the same problem of protective coating applied to glass with adhesion promoters, those skilled in the art would have found obvious to utilize silane adhesion promoter of Wieczorrek in the coating of Yoshida/EP'067, because doing so will enhance adhesion properties of the polymer film to the glass substrate.

**Response to Arguments**

5. Applicant's arguments filed 06/05/2007 have been fully considered but they are not persuasive. Applicants' argument resides in contention that combination of Yoshida and JP'181 does not render the claimed invention obvious.

Allegedly Yoshida does not teach or suggest applying a removable protective coating to a surface and does not teach that the coating is adhered to the surface. This is not found persuasive, for the following reasons:

a) as acknowledged by Applicants Yoshida does teach the binder that possesses each and every of the characteristics of the claimed binder and is the very polymer of the instant claims, therefore, such polymer will be fully capable of being adhered as a protective coating on the same surfaces as claimed. It is also noted that the coating of Yoshida is **alkali removable**, which is expressly disclosed by Yoshida.

b) in the entire body of the patent, Yoshida emphasizes the use of the polymer binder **for protective film coating** (col.1, line 15; col.8, lines 17-26).

By the virtue of the definition and any common sense reasoning the film and/or the coating is "something" that is ADHERED to the surface on which it was applied.

Applicants further argue that the adhesive strength of the existing coatings is not as great, and that the existing coating has insufficient adhesion. This argument is not found persuasive for the reason that none of the claims have ever recited any such "adhesive strength". Therefore, Applicants' arguments are more specific than the claims. It is noted that the features upon which applicant relies (i.e., adhesive strength of the claimed coating) are not recited in the rejected claim(s). Although the claims are

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interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicants' argument that in contrast to the transparent coatings of the prior art, Applicants' coatings can reduce or block the UV radiation on the need basis is also not found persuasive, because a) none of the claims call for any characteristics of the film that are concerned with its light blocking properties, and b) because the films of JP'181 are disclosed as both transmitting and reflecting light, i.e. possessing the properties of reducing UV radiation.

Applicants further argue that the teaching of JP'181 does not remedy Yoshida, because it does not teach removable coating. This is also not found persuasive, because the reference of JP'181 was brought with the sole purpose to show that the films substantially identical to those of Yoshida are in fact used for the greenhouse coatings. Had the reference to JP'181 alone taught each and every limitation of the instant claims, it would have been used alone in anticipation rejection, not in the obviousness.

Applicants' argument on deficiencies of other references of record, such as JP'941 and US'964 is moot, since these references were not used for the rejection.

And with regard to the last statement of Applicants' that the KSR memorandum did not diminish in any way the "teaching, suggestion, and motivation" in obviousness rejection, Examiner is in complete agreement with such statement, because in the instant case there are teachings, suggestions and motivations to combine the applied



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references are found in both references, and are in the knowledge of the persons skilled in the art.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael Kornakov  
Primary Examiner  
Art Unit 1746

08/04/2007